

**What is claimed is:**

1. A filtrate addition system for producing a uniform filtrate distribution in the blow dilution zone of a continuous digester comprising:

(a) a blow dilution header/nozzle assembly located in the blow dilution zone comprising

(i) a plurality of nozzles for introducing and distributing filtrate into the blow dilution zone, and

(ii) a plurality of measurement and control devices for monitoring and controlling filtrate flow through the plurality of nozzles.

2. The filtrate addition system of claim 1, wherein the blow dilution header/nozzle assembly comprises a side dilution header/nozzle assembly, a bottom dilution header/nozzle assembly, or a combination thereof.

3. The filtrate addition system of claim 1, wherein the blow dilution header/nozzle assembly comprises at least 6 nozzles.

4. The filtrate addition system of claim 1, wherein the blow dilution header/nozzle assembly comprises from 4 to 20 nozzles.

5. The filtrate addition system of claim 1, wherein the blow dilution header/nozzle assembly comprises a side dilution header/nozzle assembly having 8 to 12 evenly spaced nozzles, and a bottom dilution header/nozzle assembly having 4 to 8 evenly spaced nozzles.

6. The filtrate addition system of claim 1, wherein the measurement and control devices are magmeters and automatic ball valves.

7. A filtrate addition system for producing a uniform filtrate distribution in the blow dilution zone of a continuous digester comprising:

(a) a blow dilution header/nozzle assembly located in the blow dilution zone comprising

(i) a side dilution header/nozzle assembly having a plurality of nozzles for introducing and distributing filtrate into the blow dilution zone and at least one measurement and control device corresponding to the nozzles for monitoring and controlling filtrate flow therethrough, and

(ii) a bottom dilution header/nozzle assembly having a plurality of nozzles for introducing and distributing filtrate into the blow dilution zone and at least one measurement and control device corresponding to the nozzles for monitoring and controlling filtrate flow therethrough,

wherein the at least one measurement and control device of the side header/nozzle assembly is independent from the at least one measurement and control device of the bottom header/nozzle assembly.

8. The filtrate addition system of claim 7, wherein the blow dilution header/nozzle assembly comprises from 4 to 20 nozzles.

9. The filtrate addition system of claim 7, wherein the blow dilution header/nozzle assembly comprises a side dilution header/nozzle assembly having 8 to 12 evenly spaced nozzles, and a bottom dilution header/nozzle assembly having 4 to 8 nozzles.

10. The filtrate addition system of claim 9, wherein the blow dilution header/nozzle assembly comprises an individual measurement and control device corresponding to each nozzle of the side dilution header/nozzle assembly and the bottom dilution header/nozzle assembly.

11. The filtrate addition system of claim 7, wherein the measurement and control devices are magmeters and automatic ball valves.

12. A filtrate addition system for producing a uniform filtrate distribution in the blow dilution zone of a continuous digester comprising:

(a) a blow dilution header/nozzle assembly located in the blow dilution zone comprising

(i) a side dilution header/nozzle assembly having a plurality of nozzles for introducing and distributing filtrate into the blow dilution zone and a measurement and control device corresponding to each nozzle of the plurality of nozzles for monitoring and controlling filtrate flow therethrough, and

(ii) a bottom dilution header/nozzle assembly having a plurality of nozzles for introducing and distributing filtrate into the blow dilution zone and an individual measurement and control device corresponding to each nozzle of the plurality of nozzles for monitoring and controlling filtrate flow therethrough.

13. The filtrate addition system of claim 12, wherein the blow dilution header/nozzle assembly comprises from 4 to 20 nozzles.

14. The filtrate addition system of claim 12, wherein the blow dilution header/nozzle assembly comprises a side dilution header/nozzle assembly having 8 to 12 evenly spaced nozzles, and a bottom dilution header/nozzle assembly having 4 to 8 nozzles.

15. The filtrate addition system of claim 12, wherein the side dilution header/nozzle assembly is located at least 1 meter higher in the blow dilution zone than the entry points of the plurality of nozzles.

16. The filtrate addition system of claim 12, wherein the measurement and control devices are magmeters and automatic ball valves.

17. A method for producing a uniform filtrate distribution in the blow dilution zone of a continuous digester comprising:

- (a) introducing and distributing filtrate through a plurality of nozzles of a blow dilution header/nozzle assembly in the blow dilution zone of the continuous digester; and
- (b) measuring and controlling the filtrate flow through each nozzle of the plurality of nozzles.

18. The method of claim 17, wherein the blow dilution header/nozzle assembly comprises a side dilution header/nozzle assembly, a bottom dilution header/nozzle assembly, or a combination thereof.

19. The method of claim 17, wherein the blow dilution header/nozzle assembly comprises a side dilution header/nozzle assembly having 8 to 12 evenly spaced, small diameter nozzles, and a bottom dilution header/nozzle assembly having 4 to 8 small diameter nozzles.

20. The method of claim 17, wherein the measurement and control devices are magmeters and automatic ball valves.

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